Issue 119 June 2013

KNOTTING MATTERS

The Magazine of the International Guild of Knot Tyers

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Front Cover *Bottle covered in square knots by Jorgen Fris Jensen with a lovely sea-horse included in the knotting!*

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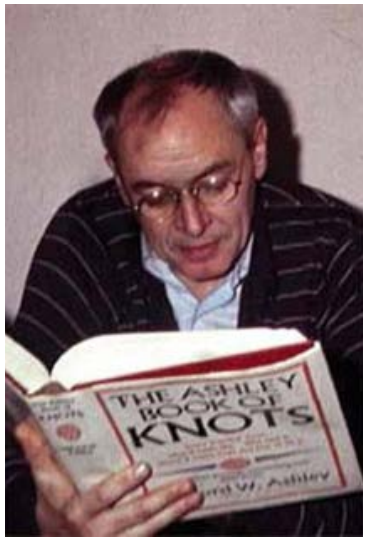
Letters to The Editor
The Things You Say!!

For Knotting Matters

PSYCHIATRIST, R D LAING, AND HUMAN KNOTS

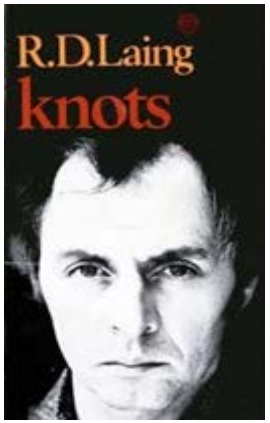
It is very strange how bits of information can be tied together [***punny! - groan - Ed.***]. My ongoing research on the public perception of psychiatrists turned up this picture in Wikipedia of the famous Scottish psychiatrist, R D Laing. Laing – whose writing I much admired when I first read him in the 1970s - was famously linked to the anti-psychiatry movement and was a 'must-read' author for left-wing students in my youth. Seeing this picture of RDL reading the Ashley Book of Knots reminded me of the psychiatrist's 1972 book, ***Knots***, published by Penguin in the UK. In this work, Laing presents a series of short pieces of poetry, all of which make clear the sort of tangles that frequently happen in human relationships. There are knots to be found everywhere – even if some are metaphorical!
Jackie Hopson 2013



R.D. Laing in 1983, perusing "***The Ashley Book of Knots***" (1944).

Photo: Robert E. Haraldsen
This picture was taken in Stockholm on board the Norwegian author Axel Jensen's ship Shanti Devi in 1983. The Ashley Book of Knots was given wittily to Laing by Jensen as a gift. Uploaded with special permission by the photographer, a friend of them both.

Cover (r) of Laing's 1972 book.
Photograph of the author by John Haynes



In June of 2011 Mike Howarth of Hertford, UK posted an article in KM 111 that your editor thought worthy of inclusion, simply because it appeared to have a plethora of information and yet no specific knowledge of what it was. It looked like a dog collar - but no-one has come forward to identify it positively. Thoughts? Comments? Nary a one so far...

CHATHAM HISTORIC DOCKYARD BUYS A PAINTING

reports our UK (South of England) stringer

On page 78 of Art Quarterly magazine's Spring 2013 issue, I read recently that the Historic Dockyard at Chatham, beside the River Medway in the English county of Kent, has acquired an oil-on-canvas painting titled 'The Rope Makers'. By an unknown English artist, it is dated c.1830-60, measures 51 x61cm, and was purchased at a total cost of £4,100. Paintings from that period of rope-making are rare, and its acquisition by the Dockyard helps them to show the role of a rope-walk in ship-building.

Described as 'somewhat naïve in style', the painting is nevertheless considered to be factually accurate. Depicting the interior of a 19th century rope-walk within a long single-storey building with louvred windows to let light in (and dust out), it portrays rope-making prior to steam mechanisation, from spinning to forming and closing strands. On one side a man winds a completed rope using a standard two-piece former; while elsewhere a fashionably dressed gentleman, perhaps the ropery owner, points out another rope coil.

The Historic Dockyard at Chatham is – as many visiting KM readers know – home to the last traditional naval rope-walk (very like the one pictured) where it still manufactures natural and synthetic rope by means of hand-powered machinery of the type shown in this painting.

[***The next AGM of the Guild will be in Chatham in 2014 - maybe we could get a look at the painting? - Ed***]

How I Did It - Picture Frames

by Pat Spiering

I would first like to thank Jerry Maske and Charlie Bell for their direction and inspiration. Jerry has some directions on making a frame (on the internet) which helped get me started. When I saw Charlie's frames on KHWW.net, I immediately considered a knotted frame tops on my bucket list of knot tying projects. Both have been very helpful.

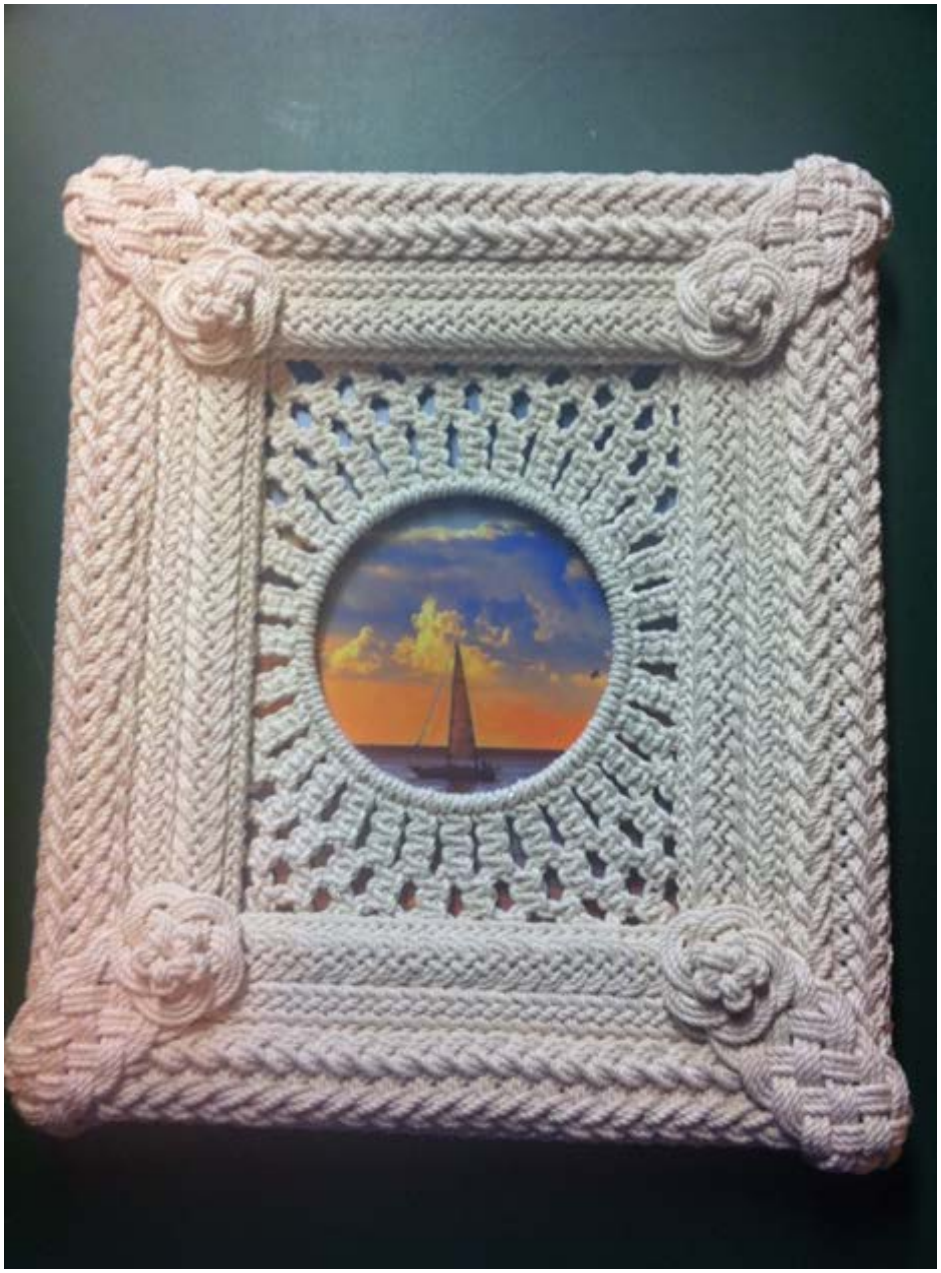
I use pine wood from Home Depot, which is very straight and inexpensive. I cut the pieces to size and then rout an edge with a router table. The sides are connected with a biscuit cutter and glued together with wood glue. Minor flaws will be covered with string, so there is some built in wiggle room. I use pieces of trim to build up an outer edge around the sides. This gives the frame more depth. The frames are made for an 8x10 picture. The right size of non-glare plexiglass is available from Home Depot for less than $2. I make 3 or four frames at a time, so I have the wood ready to go when I decide to make another one.

The string is hard lay cotton cord in size #21 and #30 from Martin Combs. The braids are from Graumont and Hensel's Encyclopedia. This frame has (from inner to outer edges) the edges covered with a tripled braid, a 3 part 5 lead flat Turk's head and a 5 point star knot.

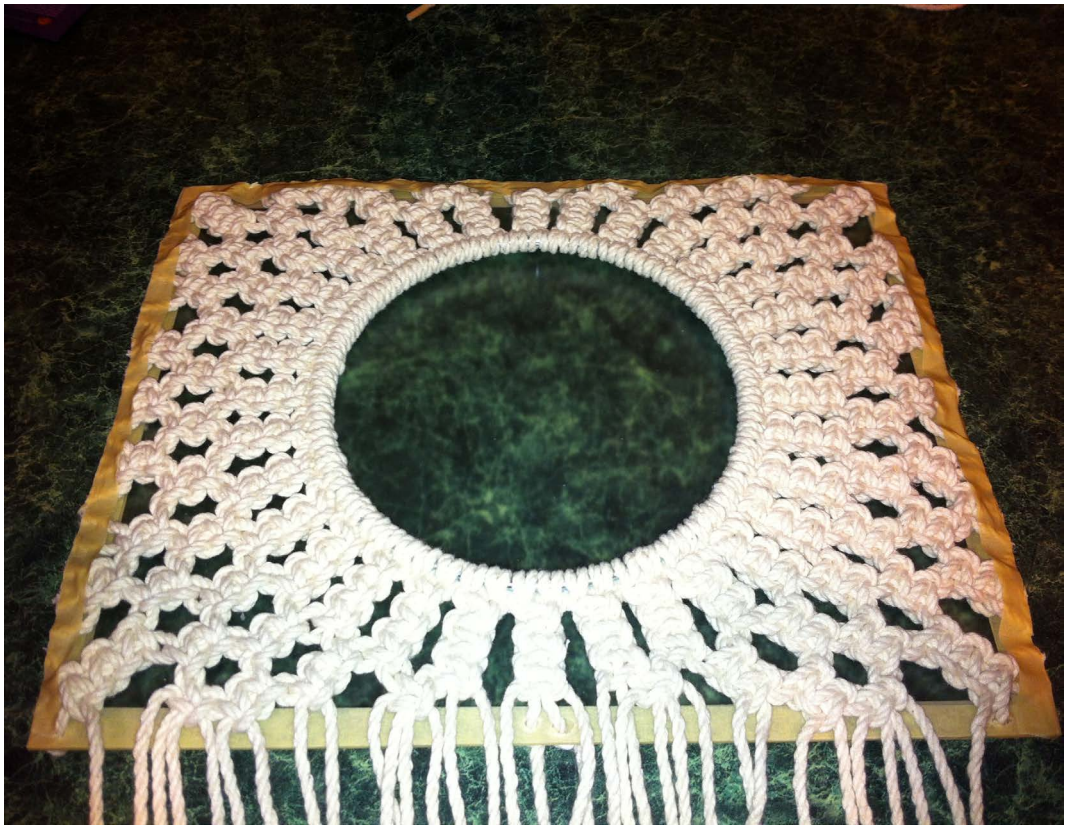
I start by braiding strips long enough to cover a side. The pieces are glued on with plain Elmer's all purpose glue. Once the glue is dry I cut the edges with a utility knife or scissors. Some people cover the corners with glue and let it dry so that it is easier to cut. To make the frame look nice, it is important to overlap the sennits some. Having any wood showing does not look good, in my opinion. I use extensive clamps and scrap pieces of wood to get the pieces glued on straight.

I tied the center piece on a wire circle from a craft store. It starts with lark's heads, then works out from the center using square knotting techniques (macrame). I drilled 2 holes in the edges of the plexiglass in each corner and 2 holes in the center of each side. I ran the appopriate pair of cords through them and then tied overhand knots to keep the center piece in the middle of the plexiglass. I used masking tape on the edge and cut the other cords flush with the edge of the plexiglass. Then I fit that piece into the frame on the edge that I created with the router table. The plexiglass is held in place with pieces of wood screwed to the back of the frame. Finally, the hanging wire is added to the back.

All the Best,



Another of Pat Spiering's frames, with oval center.



Pat Spiering's hard work on the square knotted center of the frame on page 8 (opposite). Note the Lark's Head starts and the taped edges.

REQUEST FOR ARTICLES

If you have written, or you have written permission from the author and any prior publisher to reproduce, any TECHNICAL articles about working with knots, line or anything associated therewith, consider seriously sending it for our December edition. If this appeal is successful, we will make this a regular once-per-year feature. Send to knottingmatters@igkt.net by not later than November 15, 2013.

The Healing Power of Knots

by Tim Lane, North Carolina, USA

Yes, that is a woggle on an IV Pump Pole. Probably not the most sanitary item to add to a sterile environment but the doctors, nurses and staff have kindly turned a blind eye ("Just promise to put some hand sanitizer on it"). Unfortunately the chemotherapy being pumped into my Father in Law hangs below this knot. "Papa" as he is known to his grandchildren and his favorite son-in-law (his only son-in-law which makes me his favorite) has asked me to make a fancy knot here and there over the years. It may seem silly to put a woggle on an IV pump but each time he gets to take a walk around the unit, he uses the woggle for grip. That silly woggle reminds him that his family is there too with each step in his fight against this terrible disease.

It also provides a conversation piece as visitors and staff question Papa about the knot. He would much rather talk about how his son-in-law can make decorations out of rope than to talk about his condition.

During my stay with him I have made star knots, sinnets into a belt and just "doodled" around. Sometimes Papa would talk while I worked, most times he could only sleep. But he would cock an eye and see how the rope work was coming along. The chemo may cure the disease, but I think Papa would tell you that little woggle is the best medicine he could ever get.

How We Did It - Door Handle

by David & Penny Bodger

Last year our trusty Land Cruiser named Wombat (go anywhere, stop at nothing) had a minor hiccup. Wombat has a tent on the roof and lives with friends in Australia so that whenever we visit we can set off and explore more of this fascinating country.

The problem was that I broke off the exterior door handle to the tailgate when we were camped in a fairly remote National Park. As you can imagine all our camping gear has its own place in the luggage area and is packed tightly against the rear doors. With a bit of a struggle we managed to remove some of it through the passenger doors and then I was able to wriggle over the rear seats and reach the interior door handle to release the catch. That solved the immediate crisis but left us with the problem of what to do in the next few days until we were back in civilisation and able to track down a replacement door catch.

However we never travel without an assortment of cordage and were relieved to find that we could attach a piece of string to the interior door handle and thread it carefully through the luggage [***see p. 12 - Ed***]. Then a judicious tug on it from the interior of the car was enough to release the catch provided there was someone at the back door to ease it open. Panic over and we had no further problems. It did however cause amusement at a later date when I was on my own and had to collar a passing couple in a car park to help me open the door. It also impressed the Toyota garage when we took Wombat to have a new unit fitted. As Spike Milligan would have said "String is a wonderful thing……"!

Penny Bodger

P.S. The string used was a [nylon?] braid acquired in 1997 from the Sunset Line & Twine Co., Petaluma (sadly, sold off in 2007), the company that made the parachute cord that ensured the Gemini and Apollo missions got safely back to earth. But that's another story – see Knotting Matters No 57!

Close-up detail of the attachment to the inward-opening door handle.

Threading-through completed - and a nifty space for the door handle to open above the brown box without hitting the contents of the Land Cruiser!

Printer's Pie

by Colin Grundy

How often have we come across a use of rope or cord in the workplace, accepted it as normal practice and passed it by without comment? I am disappointed that I failed to talk to my late mother and father-in-law about their involvement with knots in the workplace. My mother worked for Vickers Aircraft during World War II, covering aircraft in fabric. It was not until it was too late that I realised knots were used in the process. My father-in-law worked for many years with baling machines for Massey-Ferguson. These clever inventions had a device for tying the twine around straw bales. The questions I could have asked, but too late now!

Clifford Ashley devoted a whole chapter in his ABOK to Occupational Knots. Perhaps we as Guild members should do our bit to add to the knowledge of occupational knots before they disappear for ever. Here is a small offering on this subject.

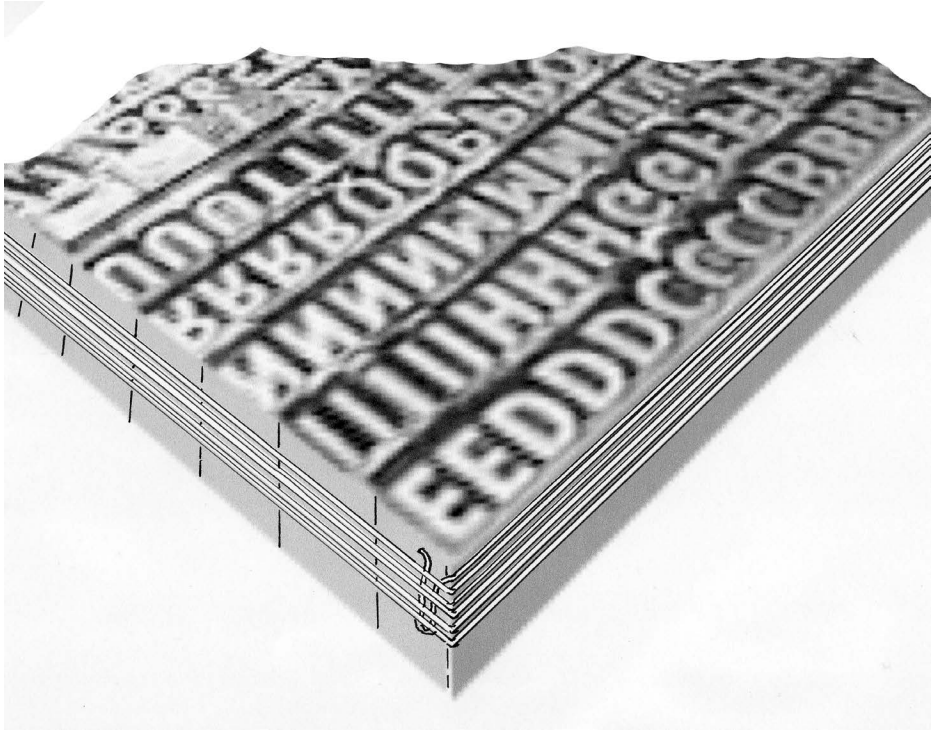
I started my working life as an apprentice compositor in a small printing works. The compositor is the person who makes up the metal type before it goes to the printing presses. We handled individual pieces of type, rather than the metal slugs that were mostly the province of newspaper houses. When the type is set and made up into pages, it needed to be secured to prevent it from being knocked over. Type that was scattered was known as pie, or printer's pie. It was common practice to bind the type with cord, and this is the way I was taught to tie pages of type.

We used small hanks of cord, very similar to builder's string line, about 1-1.5mm diameter. This was referred to as page cord. The page cord would be made up into a hank or nettle, figure of eight fashion (ABOK #3085).

Usually with the page of type held in a metal tray, known as a galley, you would put an overhand knot in one end of the cord. With the knotted end held on one corner of type, you would take a number of turns, usually around six or seven, tightly around the type and working upwards, trapping the knotted end underneath the turns. Finally with a pair of tweezers – always part of the compositor's armoury of tools – the free end would be tucked between the type and the turns of cord on the opposite corner. Thus the pieces of type were held securely and would not "pie".

To release the type, it was just a case of pulling out the free end of the tail and removing the cord.

Simple but effective!



Printer's (unspilled) Pie - securely tied!
Was this anything to do with getting pie-eyed?

Party Game

by Geoffrey Budworth

Here's an ice-breaker for a group of knottily inclined, unselfconscious and agile individuals – ten being a goodly number. Form a circle, facing inwards, and randomly clasp hands. Then try to untangle the resulting weave. From the illustration below [***next page***], which of the 4 alternatives shown is the only possible outcome?

(a) No crossings (the knot theorist's trivial knot or unknot);
(b) 2 crossings (a Hopf link);
(c) 3 crossings (a trefoil knot); or
(d) 5 crossings (a cinquefoil knot)?

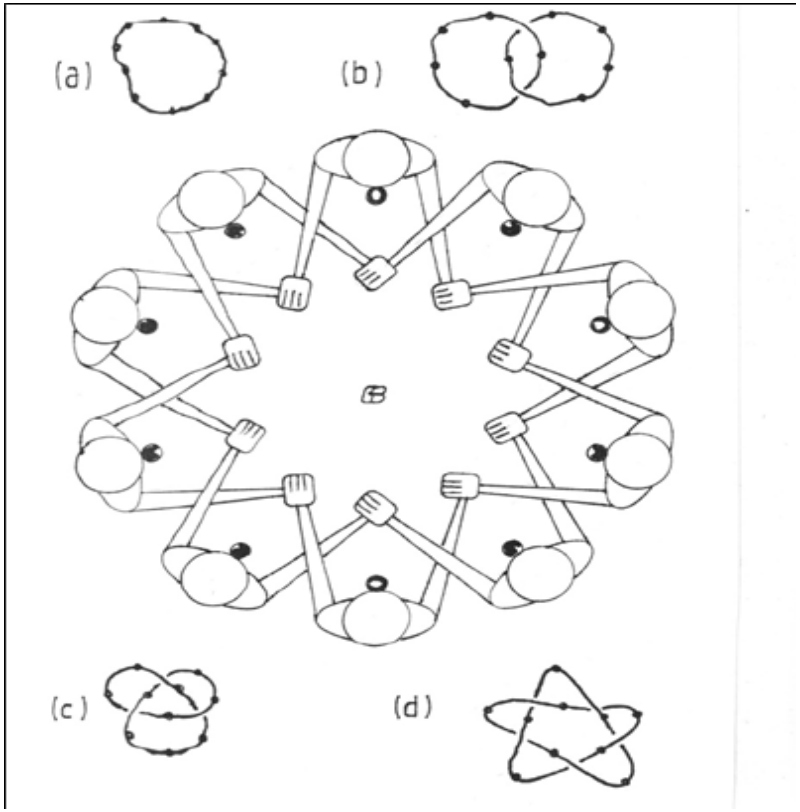
Solving hints:

1 Merely look at the entanglement and use your knotting imagination to untangle it.

2 Replicate the interlacing with actual cordage and then reduce it to its simplest form.

3 If familiar with elementary knot theory, use either crossing or linking numbers to calculate the outcome.

(No answer is provided, lest it prove too much of a temptation. Anyway, once you've solved it, you'll know.)



MORE KNOT LORE

from 'Tottles'

When I was young, my mother advised me to tie a knot in the corner of my handkerchief whenever I needed to remember something … so I tied one in hers when she wasn't looking, and she spent the rest of the day fretting over what she had forgotten. Whereas my father, who was bald, would tie overhand or thumb knots in all four corners of his hanky to wear it as a sun hat while sitting in a deck chair on the beach.

Later, as a teenage sea-cadet, I was taught that a Matthew Walker knot was 'to put a becket in a bucket' (see A#3666 and A#3667), a single MW on one of those containing salt water and a double MW on the one holding fresh water. True or fanciful, I don't know. But when I recently found myself with two identical small bags, one containing a foldaway plastic anorak and the other its companion over-trousers, I tied a double fisherman's knot in the ends of one drawstring and a double MW in the other, so that I could tell them apart. And the late knots-man Brian Field used a red (port) Turk's head on one of his two otherwise identical walking sticks, and a green (starboard) TH on its twin, because one was slightly shorter than the other (adapted for his troublesome back).

Finally, returning to handkerchiefs once more, it requires three to tie the legendary Fortunatus's Purse (think Möebius bands and Klein bottles), mock-ups of which can be viewed on internet sites, but one can only really be achieved in four spatial dimensions.

[Picture [opposite] from Chapter 7 of Sylvie & Bruno Concluded (1893): with text by Lewis Carroll and illustration by Harry Furniss, in which Mein Herr demonstrates Fortunatus's Purse to Lady Muriel.]

2013 AGM in Henley

by our Midlands, UK Stringer

The weekend of the 11th May 2013 was to see the first truly International Annual General Meeting of the IGKT, where two groups of members, separated by nearly 6000 miles, would take part in the same meeting.

On the UK side, the first members started to gather at the River and Rowing Museum, Henley-on-Thames on the Friday afternoon. Henley-on-Thames is the home of the famous Henley Royal Regatta, an annual rowing event that attracts teams from around the world. As usual, the early birds spent their time catching up with old friends and laying out their displays, while at the front of the room, Ian Schofield, Willeke van der Ham and Ken Yalden, ably assisted by the museum's technician were busy setting up the Skype (internet communication) connection that would hopefully join the two parts of the meeting the following day. Despite not being able to make the trans-Atlantic connection, tests at the UK end showed the system to be working. Satisfied with this, we retired across the River Thames to our second meeting place, the Sea Cadet headquarters of TS Guardian. Here we did our usual thing of teaching the Sea Cadets a range of knot related activities.

Bright and early next morning, we gathered again at the Museum and prepared for the visiting public. Our ranks were now swelled to over 40, including members from the Netherlands, Belgium, France and Japan. Ken Yalden chaired a pre-AGM meeting to prepare members for the AGM proper, that would be held later in the afternoon to tie in with the time on the Pacific coast of America. The remainder of the day followed the usual pattern, whereby knot-tyers swapped techniques and yarns and members of the public were treated to a range of activities that could be done with cord. Lonnie Boggs, assisted by various members, undertook sterling work outside the front of the museum attracting the public with his rope-walk.

Those who wished took advantage of free entry to the museum and increased their knowledge of rowing and the River Thames. Following the ubiquitous raffle, it was time to get down to the meeting proper. Despite many attempts to get a good Skype connection, technology finally beat us, so a fall back using mobile phones finally enabled the more important decisions of the business to be conducted.

The new constitution, as outlined in Knotting Matters 118, was accepted, and the new trustees sworn in. A number of names were put forward to join the new Executive Committee, and a proposition to print the Membership Book was accepted. The final act of the meeting was to present the President's Cup to Ben Asberg (Netherlands). This action was carried out on the President's behalf by Ken Yalden.

The museum was vacated once more, and we decamped back across the river to hold our Knot Tyer's Supper in the premises of the Henley Rowing Club. Sunday morning saw a number of stalwarts back at the museum, entertaining the public and holding impromptu knotting workshops. By midday, those who had to travel a long distance made their goodbyes, while the remainder returned to TS Guardian for lunch and some more teaching to Sea Cadets.

Yet again another successful meeting. We will look forward to meeting again in Flensburg 2013 and Chatham 2014.

[***Photographs from Henley may be seen before the center spread - Ed.***]

A booklet on lanyards

Willeke van der Ham

This small (20page) booklet from Willeke provides some easy recipes for attractive lanyards and has much practical detail. For example. how much cord? what type? to braid or not to braid?
A delightful addition to your bookshelf.

IGKT President's Jottings

June 2013

We broke new ground on Saturday May 11th with our AGM being held simultaneously in the UK and USA. This was part of our ongoing efforts to make the Guild more international in its operation. The main items were discussed in pre-link-up meetings at both venues and the votes on the rule changes were carried out simultaneously, despite an imperfect electronic link. I'm pleased to be able to report that the changes were voted for unanimously in both meetings. In addition, proposals were received for the members of the new, more wide-ranging, Executive Committee who will be carrying out the day-to-day running of the Guild, with final financial responsibility resting with the Trustees. We really hope that this new system will allow us to tap in to the wider experience and enthusiasm of this multinational group.

Because of the difficulties with the link-up, the members at Henley were not able to hear an interesting report from my predecessor, Dan Machowski, on the digitization of a manuscript document of some 1900 pages held by the Mariners' Museum, Newport News, VA. This document was written by a member of the minor English nobility, Henry Bushby, in the early part of the 20th century, and appears to be a very sweeping description of the world of knots. Some excerpts from it are viewable at http://www.marinersmuseum.org/library/notes-knots-henry-bushby-manuscript.

The manuscript was seen by Des Pawson and Gordon Perry some years ago and, following their report, the then-Council agreed that the Guild would assist in digitizing the manuscript and making it available to as wide an audience as possible. Negotiations about this are ongoing and Dan and Bob Dollar are our links with the museum. We look forward to a specific proposal from the Mariners' Museum in the near future.

After one of the coldest Springs in living memory, those of us in northern Europe are hoping that the summer will be considerably better. Many of you will be involved in demonstrating knotting at diverse venues during these next few months and I wish you all good weather and lively and interesting audiences.

Trustees & Executive Committee

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The above information is provided for your information and perusal as a service of your Trustees and the Executive Committee of your Guild.

AGM 2013
at Henley-On-Thames

The River and Rowing Museum in the far distance from TS Guardian [above]

Bellrope from the collection of Jeff Wyatt [right]

Colourful work from Jan Vos [above]

Ben Asberg receives the President's Cup from Ken Yalden

Lynn Brown's wonderful contribution to the Queen Mary Event

AGM 2013
at Long Beach, California

Some of our many visitors from four corners of the USA, the Antipodes as well as England, France and Canada gather around the starboard capstan (above) - and there was even some cake (below)!

Our formal dinner on Saturday night in the Verandah Grill where we ate with 64 of our knotting friends from around the world (above)
The private Capstan Club and Deck, where we enjoyed tying halters with Mike Bromley and making rope with Jose Hernandez-Juviel

Book Review - Why Knot?

by Geoffrey Budworth

WHY KNOT? An Introduction to the Mathematical Theory of Knots by Colin Adams © 2004 by *Key College Publishing, a division of Key Curriculum Press® in cooperation with Springer-Verlag New York Inc*

ISBN 1-931914-22-2
GB £31.66 (US equivalent: $50.02)

For those of us who feel that perhaps we ought to know some formal [mathematical] knot theory, this is a user-friendly starter kit in a cartoon format of 4 sections and 3 appendices, devoid of any real algebra, giving us enough data to decide if we would like to pursue the subject further … or stop (but with minds widened by some useful new concepts).

Section 1 A brief introduction to knots, real and theoretical
Section 2 Mathematical knot types and tools: trivial, prime and composite knots; chirality (handedness); crossing, linking and unknotting numbers; the 3 Reidemeister moves; and the Dowker notation.
Section 3 A brief history of knot theory, with its relevance to knotted DNA and molecules,
Section 4 A look into the Future
Appendix 1 Extra fun
Appendix 2 Prime knots through 8 crossings
Appendix 3 Prime links through 7 crossings
Further reading

The author, Colin Adams, is a Professor of Mathematics, who has (twice) won teaching awards, and is the author of an earlier, more detailed, introduction of knot theory, The Knot Book, *New York: W.H. Freeman, Inc/Henry Hold, 1994; Prentice Hall, 2004*.

The hefty price of this later publication unfortunately reflects its limited target market, because it is a slim product (a mere 62 pages), although it does punch above its weight with 39 brain-stretching practical exercises (labelled Experiments), and answers to the 25 needing them after Appendix 3.

To reproduce and manipulate the many knot diagrams (I counted around 200), this booklet comes with an articulated plastic worm, 1-metre long by 8mm diameter, of 50 pop-jointed segments (© Richard X Zawitz 1981). This orange-&-purple creature – trade name 'the Tangle® – was too wriggly for me and so I resorted to a piece of cord instead, but others may like it.

BOOK REVIEW
THE KNOT BIBLE
by Willeke van der Ham

The Knot Bible - the complete guide to knots and their uses

Published by Bloomsbury and written by Nic Compton ISBN 978-1-4081-5476-2 first edition 2013.

Knots tied by Ken Yalden, Colin Byfleet was technical consultant.

The general impression of the book [that I got] is that it is well written, has good information beyond the actual knots and does offer a simple-to-use guide to reliability and use. As with all books with 'bible' in the name, it comes short of meeting the goal, but it has more knots than many of the competitors on the market, roughly 200, with a good selection of practical knots, bends, coils, whippings and seizings, splices and lashings as well as a starter set of decorative knots. As a bonus, included in the 200 are some of Harry Asher's less-well-known knots.

Knotting instructions are concise, but they do need the text as well as photos for all but the most experienced knot tyers. It is a pity that in some cases the aesthetics have won over the readability of the photos.

Ken was told not to show his hands in the photos and was given some rope and backgrounds to use, and while most photos used in the book are those for which he tied the knots, not all are. Some come out of the photo library of the publishers. Not as visible, Colin has had an influence on the book; they did listen to what he said in proof reading, especially in the photos - without him they would have gone for the 'artistic' slant in many more.

They have not managed to get all the errors out, those that are left are mainly in the names and the fact that the order of the items is not always logical.

Review written by Willeke van der Ham

BOOK REVIEW
WHY KNOT?
by Des Pawson MBE

I rarely buy knot books these days and even more rarely read them from cover to cover, but WHY KNOT ? by Philippe Petit, long standing IGKT member, is different. Written and illustrated by the man who walked on a wire between New York's Twin Towers in 1974, this is not just another book of knots, it is an experience.

It is written in a clear conversational style and covers, as he says, more than 60 ingenious, useful, beautiful, lifesaving and secure knots. This is a book of practical knots, splices and knot lore. There is not a Turk's Head in sight, but the Monkey's Fist is included, but then that has a very practical purpose. Philippe drew all the illustrations himself in a very simple but clear way, using colour from time to time for clarity, interspersed with delightful sketches and photographs of various of his performances, which give rise to a relevant, personal, and unique knot story.

But let's start with the cover. Many publishers have struggled with the idea of providing a piece of rope with their book. "Why Knot?" has an extra thick cover with the "O" of KNOT a cut out space, covered with a clear window, filled with a beautiful coil of 4mm red cord. The rope is accessed from inside the cover and, when the rope is retrieved, the clear window displays the red figure of eight knot printed on the fly sheet: a most ingenious solution. This sort of planning and thinking goes on throughout the book. I have to confess that the rope looked so good that I left it in place, but then, like most IGKT members, I have a piece of rope in my pockets at all times.

Open up the book and on the inside of the fly sheet, without further ado, he invites you to "jump right in" and tie a square knot, explaining that this is his style, to get on with it.

The introduction follows, "imagine a world without rope", then the background to the book, about ropes, about knots and a section on the Ashley Book of Knots , the International Guild of Knot Tyers and Knotting Matters.

After this introductory part, he goes into his selection of knots: Binding Knots, Bends Securing and Freeing, Loops, Seizings and Lashings Running Knots, Lifesavers, Twines threads & Fishing lines, Splices and Closings. These various sections contain not just the tying instructions but alternative names , sometimes a tale, or some technical advice, sometimes a tip or a piece of history. Every now and then he slips in a surprise item; Magic, a Challenge or what he calls Extraordinary.

Throughout all of this Philippe Petit pays tribute to those writers before him who have given him the best ways of looking at a knot or tying it. Knotting Matters gets plenty of mentions. Indeed, the book ends with "On the Knotter's Shelves" a wide ranging list of books, motion pictures, videos and websites, often with a brief comment, which is very useful.

WHY KNOT? is an enjoyable read, giving a personal perspective on practical knots. It is not for you if you want decorative knots or practical ropework projects, but buy it to read and get a slightly differing, slightly quirky, view of everyday knots in a book that has thoughtfully been put together, which has something for novice and informed knotter alike.

Why Knot? by Philippe Petit, *Abrams Image, New York, 04/09/2013,*
ISBN 978-1-4197-0676-9
US $19.95 Can, $19.95 UK

Quote from his book: "*Personally, I find the content of KM to be at times unbalanced. Lately it seems to lean more toward retirees' macrame achievements, social activities of the local branches, and personal announcements than knot essays and investigations. Also, the illustrations are at times not the best quality, and some of the articles (many of which are indeed interesting) could definitely use the help of a graphic designer.*" pp 38-39. Readers & authors? Send to knottingmatters@igkt.net

News From the Editor

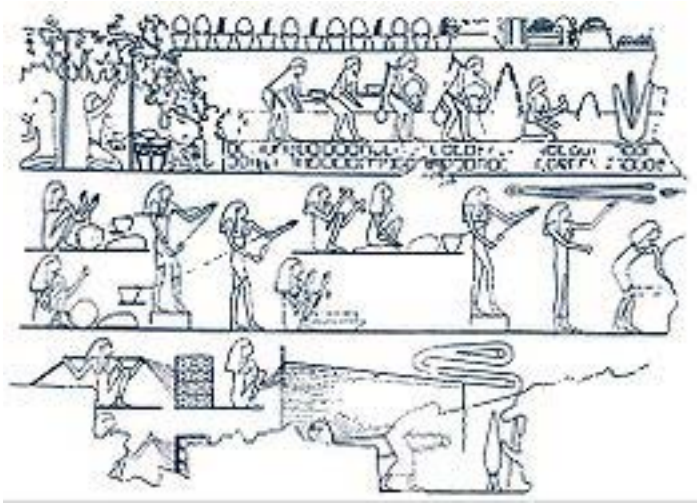
Offshore Energy Group (OEDIGITAL.COM) recently published (February 2013) an article written by Meg Chesshyre about a new facility opening for the Bridon Ropes Company in Neptune Quay, Newcastle, UK. I bring this to your attention because I was astonished to read about the size and variety of the wire ropes that are being manufactured there. The offshore energy industry is well-known for their need for anchor lines that can withstand constant immersion in deep water applications and the associated twisting that accompanies those wires. This latest manufacturing facility uses a series of twenty-four bobbins, each the size of a small house, to close (see definition below) the incredible 9.8-inch (250 mm) diameter steel cable.

Definition of closing a wire rope:
The finished strands [of wire] are wound in turn upon large bobbins, and mounted in the flyers or disks of rope closing machines. These machines are similar in design to the strand-making machine, but are naturally much heavier in construction, and therefore revolve at a proportional speed. The modern machine, or the type most generally used, makes about fifty revolutions per minute, whilst three times this speed is used when spinning the strands.

For several photographs of these stunning bobbin closing machines (up to 16 internal strands and 8 external strands) see their web-site at:

http://oedigital.com/component/k2/item/2421-additional-bobbins-to-reel-in-sophisticated-rope-applications

The wire rope mentioned above is a particular type that is anti-rotating wire rope that includes left-laid (S-laid) wires inside the right-laid (Z-laid) outer sheathing wires.



An old hieroglyph of Egyptian women making rope using mechanical assistance - from circa 5000 BCE!

Illustration in a woodcut of a ropemaker from c.1425

A modern display of the old methods, basically unchanged, of making ropes. from Turku, Finland

From the Editor's Blotter

I begin my editor's note with a sincere apology to those of you whose expectation is that your Knotting Matters arrive on time. I have had family matters to deal with that have prevented my usual alacrity (OK - somewhat usual alacrity) but, having now moved on from that, I now bend myself once more to the enjoyable process of editing this latest issue of your work.

You may have noted that there are three book reviews this quarter - why? Because it strikes me that we gain some of our information from each other in such venues as our AGM or half-yearly meetings, some we get from casual meetings that are less predictable, some we get from You-Tube or other video and tutorial postings on the internet sites and some from reading. I am firmly of the opinion that one can never have too many books (unless one is living on a narrowboat or in a tent, in which case there is always the library) and that anyone willing to paste their name in perpetuity on some written material deserves our attention, whether that is to admire, to copy or to sneer at. We read our magazine each quarter in hopes of gleaning information and to see what others may be doing - this represents a sector of our lives that may prove useful in searching out new or previously unpublished information.

I have had many reports from those attending the AGM on the Queen Mary in Long Beach that they enjoyed themselves, for which news I am happy. Elements of the gathering could have been improved, not least the attempt to link up electronically with Henley-on-Thames! A bandwidth problem experienced by the venue provider prevented our link from working for more than about three seconds at a time. They have promised to upgrade their system but this does nothing to assuage our members who would have liked to have taken part in such an historic occasion. I hope that this will be tried again, more successfully, and that we can enjoy each others' company and exchange information to a much higher degree in the future. Your comments, as always, are welcomed.

The Dickinson Splice

by

Colin Grundy

During the 1920's and 30's, some Brigades in the British Fire Service adopted an alternative method of lowering victims from buildings that did not involve the tying of the the Chair Knot. A special rescue line was created, and named the Lowering Line. It is the author's opinion that this may have originated with the London Fire Brigade, the earliest reference to lowering lines being in a book[1] by London Fire Brigade, dated 1921.

Originally made of 2 inch circumference (16mm diameter) best Italian hemp, these lines were 120 feet (36m) in length, and were made in the Brigade workshops. The lowering line was also taken up by other Fire Brigades some of which adopted a standard length of 130 feet (40m). The running end terminated in two legs each having a running eye. One leg of 5 feet (1.5m) in length was made in the standing part of the line. The second leg of 5 feet 6 inches (1.56m) was side spliced (ABOK #2826) into the standing part. It was common practice to serve over the splices in Z laid rope.

To enable the standing part to be identified by touch, a Turk's head knot (ABOK #1282) was made just below the side splice. The running eye of the shorter leg was placed around the victim's chest underneath the armpits, and the eye of the longer leg around the legs. The reasoning behind placing the victim's upper body in the standing part, was that should the splice part, the victim would remain suspended in a head up position. A guy line of similar length, made of sash cord, was stowed with the lowering line to keep the victim away from obstructions during the lowering process. This was either tied with a clove hitch to the standing part at the side splice, or was spliced into the standing part.

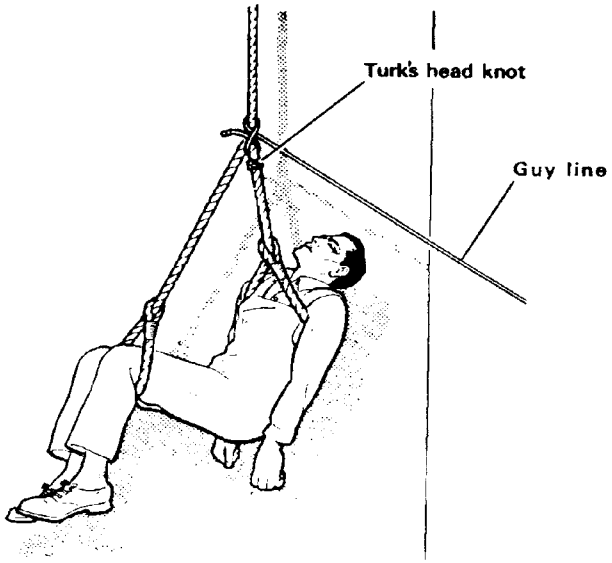
A lowering line with guy line attached, stowed in a canvas rucksack. Material 16mm polyester Z laid.

Lowering lines were often stowed in a leather harness on the side of escape ladders, or in an easily accessible place on fire engines, so that they would be available for immediate use. Later, it was common practice to carry them stowed in a canvas rucksack, with the guy line inside a small bag ready for immediate deployment.

Some lowering lines terminated in a snap hook in place of the legs, so that instead of placing the victim in running eyes, they would be placed in a special rescue sling. For many years, the line would be controlled by a practice known as "lowering underfoot".

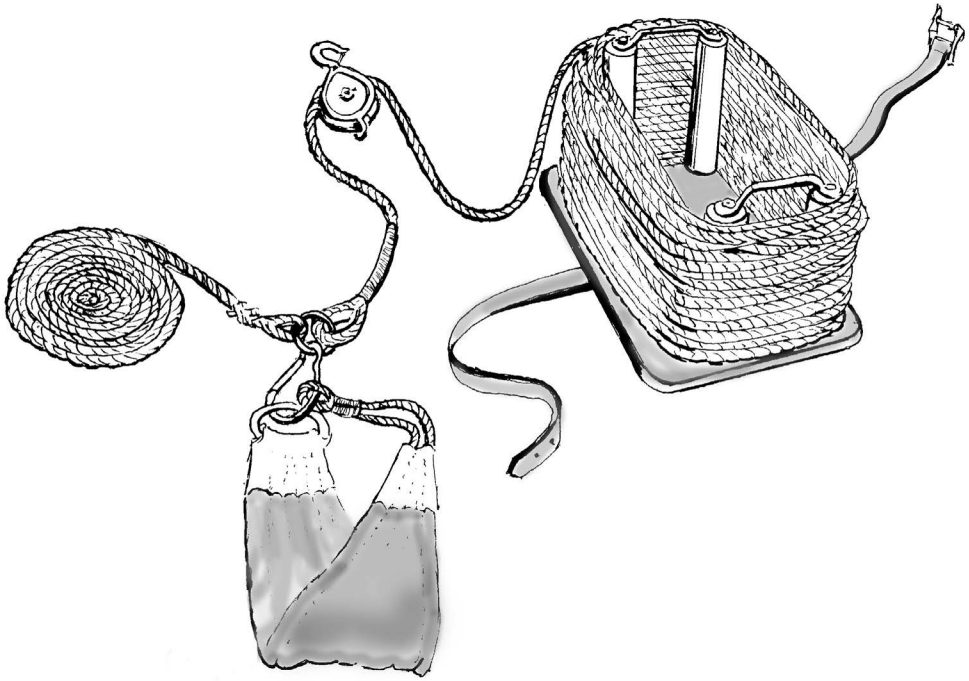
Like many traditional practices in the Fire Service, they eventually fell foul of modern legislation. Following the introduction of the Working at Height Regulations 2005, the majority of fire brigades in the UK dispensed with lowering lines in favour of kernmantle ropes and other specialist equipment.

In addition to lowering lines, with the advent of turntable ladders – an extra long ladder (normally 100 feet) mounted by a means of a turntable on a vehicle chassis – special rescue lines came into use. Made of the same rope as lowering lines, these would be twice the length of the ladder plus about 20 feet (6m) of standing end. The running end terminated in an eye splice fitted with a thimble. Attached to this was a steel ring and a snap hook to which a rescue sling would be clipped. The standing end was whipped. Also attached to the steel ring was a 20 feet length of thinner line to be used as a guy line when the victim approached the ground. [***lowering line in use from Manual of Firemanship by HMSO***]



These lines were rove through a single sheave block that was fitted with a snap hook. The remainder of the the line was stowed on a special cradle. When the rescue line was needed, the block would be clipped to a special eye at the head of the ladder and the line and sling would ascend as the ladder was extended, the remainder of the line paying off the cradle. When the required height was reached, turns would be taken with the standing part around a bollard fitted to the side of the turntable, this would provide the necessary friction to control the lowering of the victim safely.

With the advent of man-made fibre ropes, Italian hemp was gradually superseded by polyester ropes. A British Standard[2] for Fire Service rescue lines was produced that specified lines should be either 16mm Z-laid or 16 mm braided polyester. Where braided rope is used, the Dickinson Splice must be used.



A turntable ladder rescue line with sling.

The Dickinson splice was developed at the factory of Hawkins and Tipson, later to become Marlow Ropes, and was named after Wally Dickinson, a director of the firm. The rope used, a 16 plait Matt, is now only made for special applications. Marlow Ropes continue to maintain the skill among some of their splicing team to produce the Dickinson splice[3].

What make the Dickinson splice different from most other braid splices? The core is gripped like most braid splices by the constriction of the outer braid, often referred to as the Chinese handcuff principle. However, the cover yarns are tucked back into themselves; this dispenses with the need to stitch or whip the throat of the splice to hold it secure when not loaded.

My aim was to attempt to make a Dickinson splice. Reading the instructions, it appears that the rope is made of a core of parallel yarns inside an intermediate braided cover, with a 16 plait outer cover. Possibly the nearest mass market rope of similar construction might be ropes such as Vectran™ or Dyneema™. Despite searching a number of chandleries, I was unable to source a suitable sample. What I did have available, was 14mm and 10mm Marlowbraid. This rope has a 16 plait cover and a lightly laid core. Stripping out the core from the larger rope and replacing it with the thinner rope, I was able to replicate something close to what I needed (Photo 1).
The tools I used to make the splice were:
scissors, adhesive tape, 600mm of thin strong cord, a threaded needle, a Swedish fid, a pair of forceps and a wire loop.

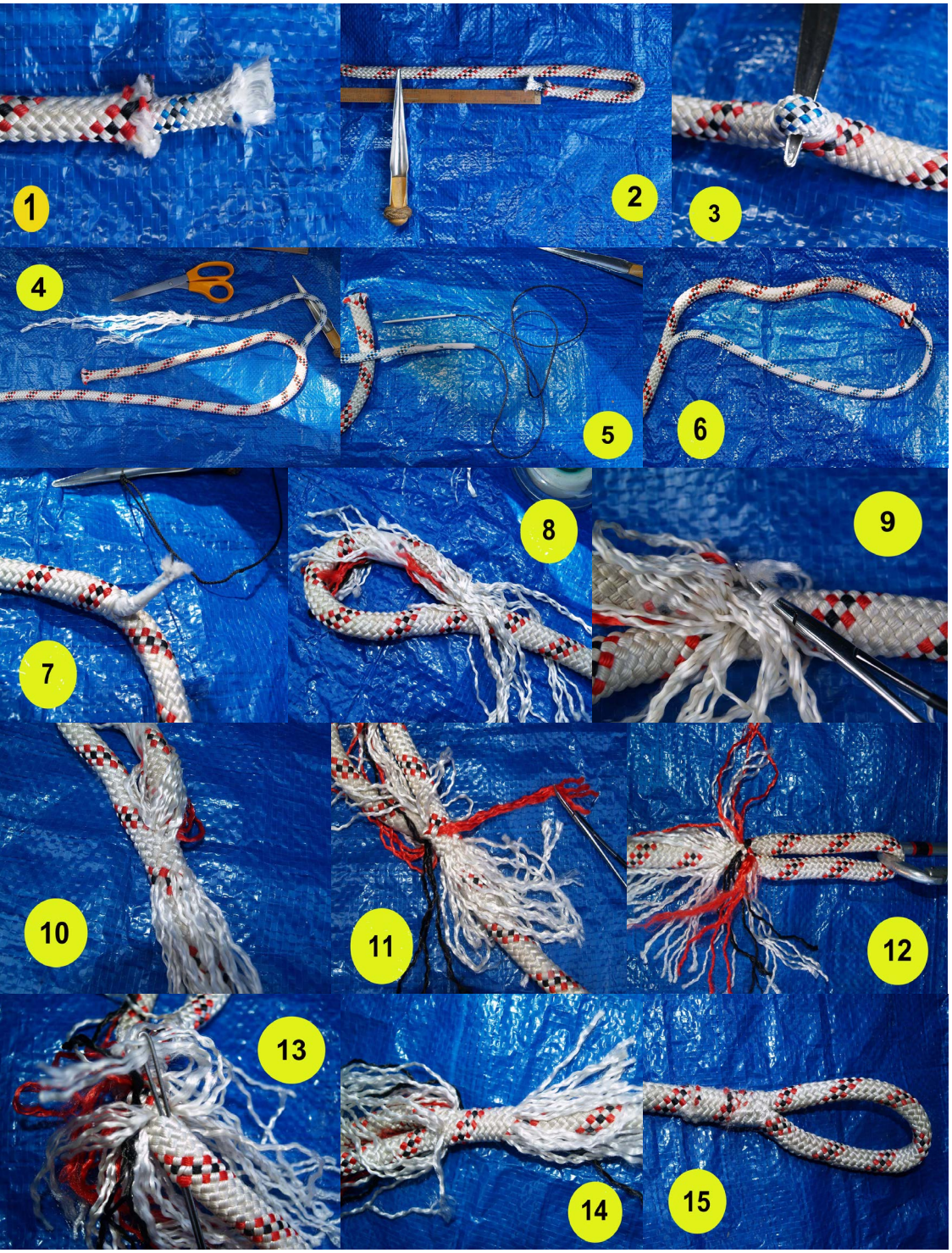
The first step was to make a non slip loop approximately 2 metres from the end of the rope, this prevents movement between the rope components further along the rope and maintains their balance. For this, I prefer to use an Alpine Butterfly. Having shaped an eye of the required size, measure a further 150mm along the rope (Photo 2) and, using a Swedish fid, open up the fibres of the cover and withdraw the inner braid (Photo 3). Pull the inner braid back to reveal approximately 300mm of the core yarns. Taper the core yarns by progressively trimming them towards the intermediate braid (Photo 4). Smooth back the braid over the core and taper the last 20-40mm by removing selected yarns. Attach the thin cord to the intermediate braid and secure with adhesive tape (Photo 5). I made a few attempts at this, before I was able to get it to hold securely – stitching backwards and forwards two or three times helped!

Attach the threaded needle to the end of the cord, and then feed it into the outer cover from the end (Photo 6). Making sure the cover is pulled well back towards the knot to give plenty of room inside, continue to feed the needle past the throat of the splice before exiting the cover 300mm further on. Draw the core and intermediate cover through until it exits the cover (Photo 7). Turning your attention to the end of the cover, un-plait the strands for 80mm. I found it useful to mark this point with a piece of adhesive tape. The cover is made from 16 strands, eight rotating to the right and eight rotating to the left. Taking the left-hand strands, fold them back, taping them out of the way (Photo 8).

The instructions tell you to use a rug hook, but I replaced this with a pair of curved end forceps. Taking one of the centre right-hand strands, tuck it under one strand of the plait so that it follows the course of the right-hand strands of the cover (Photo 9). Repeat this process until all right-hand strands have been tucked once. If a strand does not fall readily in line, bring it inside the cover to a suitable point. Continue to tuck each strand for a further three tucks. All strands should finish level (Photo 10). Remove the tape from the left-hand rotating strands and tuck each strand once following the left-hand strands of the cover (Photo 11). Anchor the eye and pull on each of the sixteen strands to ensure they have equal tension and the core is not slack inside the cover (Photo 12). Tuck the right-hand strands once more, then using a wire loop, draw the strand inside the cover exiting a distance of about 25mm further towards the knot (Photo 13).
Now turn your attention back to the left-hand strands (Photo 14). Tuck these a further four times and then draw them inside the cover with the wire loop, exiting 25mm further down as you did with the right-hand strands. By this stage, the cover strands are very tight, and it will be necessary to work suitable entry and exit holes with a Swedish fid.
Anchor the eye and work all strands to ensure the cover is nice and even. Pull the core out for a further 50mm and cut the end on a taper. With the eye still anchored, pull on the knot and work the cover to smooth it over the core. Finally trim all the ends of the strands close to the cover (Photo 15).
I have no data to compare the strength or security of the Dickinson splice with present day splices in materials of similar construction. The reason behind specifying this splice for braided lines in BS3367 was no doubt due to the involvement of Hawkins and Tipson with the appropriate British Standards Committee. Now that Fire Brigades in the UK are discarding these lines in favour of more modern practices and equipment, the Dickinson splice will quite probably be consigned to history.

References

1 LFB Question and Answers Book, 1st edition, London Fire Brigade 1921
2 BS3367:1980 Specification for fire brigade and industrial ropes and rescue lines, British Standards Institution (First published 1966, now replaced by BS3367:1999)
3 Correspondence with Marlow Ropes Ltd.



Future Meetings

IGKT Half Yearly Meeting 2013

2013 October 4/6

Participants please register not later than

August 10th. 2013

We have found out another place for lodging. It is located not far from the museum and offers civil rates:

http://www.hotelscombined.de/Hotel/Jugendherberge_Flensburg.htm

Water Tied In Knots?

from our UK Science Correspondent

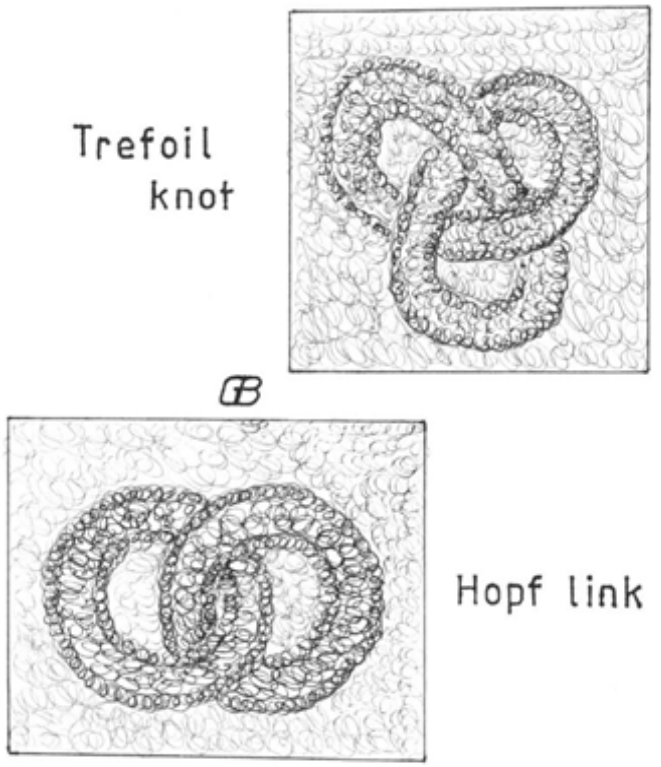
Once upon a time, eminent 19th century physicists conjectured that atoms might be energetic knots in the 'ether' then imagined to permeate the universe; but had to abandon the concept when it was established there was no such thing as ether (yet another beautiful hypothesis murdered by an ugly fact).

It has recently been reported[1] however that two physicists[2] at the University of Chicago, Illinois, USA, have contrived to tie water into knots. Dragging 3D-printed strips of plastic shaped like knotted wings through water filled with microscopic bubbles resulted in frothy knot-shaped flows within the bubbles – just as a wing passing through air trails a vortex – and the team captured nebulous images of these fluid knots using lasers (which my two crude sketches only poorly represent). The knots created were either trefoils or the interlinked rings known as a Hopf link.

Their findings were presented to the 65th Annual Meeting of the American Physical Society (Division of Fluid Dynamics) on Tuesday 20th November 2012 in San Diego, California, and subsequently reported[3] in that Society's 2013 Bulletin, Volume 57, Number 14.

The men are now investigating if it might be possible to generate other more complicated fluid knots. Until this breakthrough, knots in water were merely thought-experiments; but fluid knots made in the laboratory may enhance understanding of air flow around aeroplane wings, the behaviour of superfluids and perhaps even of the frictionless quantum fluids thought to exist inside neutron stars.

[1] New Scientist, 9th March 2013, page 15
[2] Irvine, William; Kleckner, Dustin
[3] Authors – Irvine, William; Kleckner, Dustin; & Scheeler, Martin



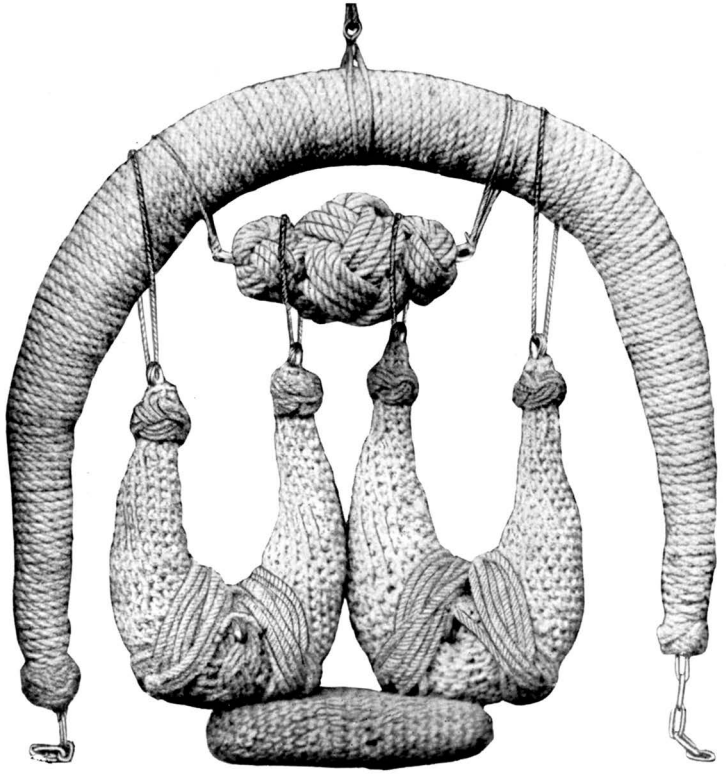
Comments and Errata

No person has seen fit to correct errors that were [or may have been] in the last issue #118 - may we assume that none exist? My thanks to those of you who are blessed with such keen eyes - it really helps keep up our quality!

Ancient Practice Continues Into The Present

Photograph from the Past Supplied by Des Pawson, MBE

STEM AND STERN FENDERS TO ORDER



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A sampler of the types of fender that could be supplied by R. Hood Haggie & Son, Ltd., of Newcastle-on-Tyne, eventually acquired in 1974 by British Ropes and then amalgamated into Bridon who were then taken over as FKI. I wonder if they (FKI) still make fenders to order?

Alaskan Branch

Every Thu. evening 6:00 to 8:00
Anchorage Senior Center
1300 E 19th Ave., Anchorage, AK
Contact Charles Rigden
Tel: (1) 928/231-4775

East Anglian Branch

Contact: Des Pawson
Tel: +44(0) 1473 690 090
e-mail: des@despawson.com

French Branch

Contact Jean-Pierre Durand
06 64 00 66 91
durand0547@orange.fr
www.igktfrance.com

German Branch

Contact: Andree Treffenfeld
Hermann-Lons Str 3C, D-24558
Henstedt-Ulzburg, Germany
Telephone: +49 (0) 172 4156789
Email: info@knotengilde.de

Midlands Branch

The Old Swan, Netherton
Contact: Bruce Turley
Tel: 0121 453 4124

Northwest Branch

Contact: Dave Walker
Tel: 01244 682 117

Netherlands

Every last Saturday (except Dec.)
De Hoop, Rotterdam
Contact: Frits Ottens
Tel: +31(0)587850011
Fruitstraat 58, 8933 GR Leeuwarden, Netherlands
E-mail: frits.efina@telfort.nl

NAB - Mid-Atlantic Region

Contact: Michael Pollock
See handbook for details

NAB - Knot in the Middle

Contact: Rusty Helms
See Handbook for details

Pacific Americas Branch

Second Tuesday of each month
At the Los Angeles Maritime Institute (upstairs)
San Pedro, California
Contact: Jimmy Williams
Tel: (1) 310/679-6864
e-mail: igktpab@gmail.com

Solent Branch

Second Tues. of even-number months
Fareham Sailing and Motor Boat Club
Fareham, Hants, UK
Contact: Ken Yalden
Tel: +44(0) 23 9225 9280

Surrey Branch

Meetings are held at Guildford District Scout Centre, Nightingale Road, Guildford, starting at 20:00 hrs. Please phone for more details
Contact: Howard Denyer
Tel: +44(0) 1483 536 401
www.surreyknots.org.uk

Sweden

Contact: Christoffer Åström
Tel: +46 736 381 731
E-mail: christoffer@knopar.se

West Country Knotters

Last Sat. of odd months @13:00 hrs
The Benjamin Perry Boathouse Activity and Training Centre
Phoenix Wharf, Lower Guinea Street, Bristol BS1 6TJ
Contact: Richard Hopkins for directions
Tel: 0117 986 7146
May be subject to change - call first

West Yorkshire Branch

Contact: David Pearson
Tel: 0113 257 2689

Back cover *A quiet goodnight from the port side of the Queen Mary, site of this year's AGM in the USA - photo credit Kim Moore.*